

§Appl. No. 09/856,044  
Amdt. dated August 11, 2004  
Reply to Office Action of, May 13, 2004

**Listing of Claims:**

Please **amend** the claims as follows:

**Claim 1** (Previously Presented) A method of identifying one or more unknown microorganisms in a sample comprising:

searching a sequence database for a plurality of intact, undigested proteins that are predicted to have the molecular weights of proteins in a mass spectrum of a sample, whereby said one or more unknown microorganisms are identified,

wherein said sample comprises a plurality of proteins from one or more unknown microorganisms, and said database is searched for more than one different protein.

**Claim 2** (Original) A method of claim 1, wherein the sequence database is a protein sequence database.

**Claim 3** (Original) A method of claim 1, wherein the sequence database is a nucleotide sequence database.

**Claim 4** (Original) A method of claim 1, wherein the mass spectrometry data is MALDI-TOF data.

**Claim 5** (Original) A method of claim 1, wherein the mass spectrometry data is obtained by electrospray on a time-of-flight, quadrupole, or ion trap mass analyzer.

**Claim 6** (Cancelled)

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**Claim 7 (Original)** A method of claim 1, further comprising:  
performing a mass spectral analysis on a sample comprising one or more microorganisms.

**Claim 8 (Original)** A method of claim 1, further comprising:  
identifying molecular weights of proteins in a mass spectrum of said sample.

**Claim 9 (Original)** A method of claim 1, wherein said sample comprises at least two  
different species of microorganisms.

**Claim 10 (Original)** A method of claim 1, wherein the sequence database is the  
NCBI/SwissProt/EMBL database.

**Claim 11 (Original)** A method of claim 1, further comprising chemical or enzymatic  
digestion of a protein in said sample.

**Claim 12 (New)** A method of claim 1, wherein said sequence database comprises  
nucleotide or protein sequence information that is converted into molecular weight information.

**Claim 13 (New)** A method of identifying one or more unknown microorganisms in a  
sample comprising:  
searching a database for a plurality of intact, undigested proteins that are predicted to  
have the molecular weights of proteins in a mass spectrum of a sample, whereby said one or  
more unknown microorganisms are identified,  
wherein said sample comprises a plurality of proteins from one or more unknown  
microorganisms, and said database is searched for more than one different protein, and

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wherein said database comprises molecular weight information deduced from nucleotide or protein sequence information obtained from genomic sequencing of known microorganisms.

**Claim 14** (New) A method of claim 1, wherein the database searching consists of searching a database for a plurality of intact, undigested proteins.

**Claim 16** (New) A method of claim 13, wherein the database searching consists of searching a database for a plurality of intact, undigested proteins.